


#4189
OK


WATER QUALITY M E M O R A N D U M

Utah Coal Regulatory Program

March 24, 2013

TO: Internal File

THRU: Daron Haddock, Permit Supervisor 

FROM: Steve Christensen, Environmental Scientist 

RE: 2012 3rd Quarter Water Monitoring, West Ridge Resources, West Ridge Mine,
Task ID #4189

The West Ridge Mine is currently operational in the Book Cliff Mountain range of Carbon County, UT. Water monitoring data is submitted quarterly to the Division EDI database. Beginning on page 7-36 of the approved Mining and Reclamation Plan (MRP), water monitoring protocols and sampling requirements are provided for surface water, ground water, monitoring wells and UPDES outfalls in Tables 7-1, 7-2, 7-3 and 7-4 respectively.

A Division Order was issued to the Permittee on April 3rd, 2012 (due July 2nd, 2012). The Division Order required the Permittee to revise their currently approved Probable Hydrologic Consequences (PHC) section of the Mining and Reclamation Plan (MRP). The PHC amendment was submitted and reviewed by the Division (Task ID # 4143). The amendment was found deficient and returned to the Permittee for additional revisions on September 7th, 2012. The amendment was resubmitted and subsequently approved on March 28th, 2013.

A Notice of Violation (NOV #10103) was issued to the Permittee on January 10th, 2013 for missing water quantity and quality data for both 2nd and 3rd quarter of 2013 (See attached). The Permittee provided the missing water data prior to the deadline of February 7th, 2012 and NOV #10103 was terminated.

1. Was data submitted for all of the MRP required sites? YES ☒ NO ☐

Springs

The approved MRP outlines the monitoring of 8 springs (SP-8, SP-12, SP-13, SP-101, SP-0102, Road Spring, Section 5 Spring and SP-80). Two of the monitored springs (SP-12 and SP-13) discharge from the lower slopes of West Ridge in Whitmore Canyon. Spring SP-8

discharges in the upper drainage of C Canyon. Hanging Rock Spring (S-80) is located near the northwest corner of the permit area and discharges from the east slopes of Whitmore Canyon.

Based upon permitting actions relative to mine expansions into the Right Fork of Whitmore Canyon, Road Spring and Section 5 Spring were added to the water monitoring program. The Permittee began collecting data on these springs in June of 2011. As a result, the 3rd quarter of 2011 is the first quarter of active monitoring for these springs.

Data was submitted for all of the required spring monitoring sites.

Streams

The approved MRP outlines the monitoring of nine stream sites (ST-3, ST-6, ST-8, ST-15, Patterfore, LF-1, LF-2, RF-1 and RF-2). Until the 2nd quarter of 2011, the surface water monitoring plan had included twelve stream monitoring sites; however, an amendment was submitted and approved by the Division (Task ID #3738) in March of 2011 that eliminated five of the sites. The amendment eliminated the monitoring of ST-5, ST-6A, ST-7, ST-11, ST-12 and ST-13. As a result, the monitoring of these stream sites was discontinued the 2nd quarter of 2011.

Grassy Trail Creek is the only intermittent/perennial stream in the permit and adjacent areas. The upper drainages of Grassy Trail Creek (i.e. the Left and Right Fork) are monitored quarterly. Four monitoring sites have been established on the Left Fork (LF-1, LF-2, ST-3 and ST-15). Monitoring sites LF-1 and LF-2 are flume sites where continuous monitoring data is obtained during mid- to high-flow periods. Site ST-15 monitors flow from the Spring Canyon drainage (tributary to the Left Fork).

Three monitoring sites have been established on the Right Fork (RF-1, RF-2 and Patterfore Stream). RF-1 and RF-2 are flume sites where continuous monitoring data is obtained during mid- to high-flow periods. The Patterfore Stream is a tributary to the Right Fork and was established as a monitoring site in the spring of 2011 in order to obtain additional data on the Right Fork drainage.

Data was submitted for all the required stream/surface water monitoring points.

Wells

Quarterly operational sampling is required for one groundwater-monitoring well (Site DH 86-2).

Monitoring well DH 86-2 was sampled during this quarter.

Underground Mine-Water Sample

Monthly samples of the underground, pre-treatment mine water are required. The requirement was established on August 24th, 2010.

The required monthly samples were submitted for this quarter.

UPDES

Operational sampling is required monthly for two active UPDES sites (Permit # UT0025640). Site D001 is the mine sites primary sediment pond discharge to the ephemeral 'C' Canyon drainage. Site D002 is the mine-water discharge to the ephemeral 'C' Canyon drainage. Specific limitations and self-monitoring requirements as outlined in the UPDES permit are presented in the table below:

Effluent Characteristics	Effluent Limitations
Flow, MGD (million gallons per day)	1.0
Total Suspended Solids (TSS), ppm	70
Total Iron, ppm	1.3
Oil & Grease, ppm	10
Total Dissolved Solids (TDS), ppm	2,000
pH	9

Outfall 001 did not report a discharge this quarter. Data was submitted for UPDES Outfall 002.

Underground Flow Meters

Based upon permitting actions relative to mine expansions into the Right Fork of Whitmore Canyon, the Permittee committed to installing and monitoring flow meters in the locations of long-wall panels #20, #21 and #22. The locations of these flow meters are shown on Map 7-7 and in Appendix 7-16.

Two flow meters were installed (U-15E and U-17E). The two meters monitored the amount of ground water encountered in long-wall panels #20 and #21 (U-15E and U-17E respectively). Monitoring will continue until such time as that portion of the mine is sealed per MSHA safety considerations.

On March 27th, 2013, West Ridge personnel informed the Division that the portion of the mine where the flow meters are located will be sealed. Flow data for February was submitted by

the Permittee. Additional monitoring of the flow meters will no longer be possible.

The flow value data was submitted for both flow meters (U-15E and U-17E).

2. Were all required parameters reported for each site? YES ☒ NO ☐

Spring Monitoring Sites: *All of the required data was submitted for the spring monitoring sites.*

Surface Water Monitoring Sites: *All surface water monitoring data was submitted for the 3rd quarter of 2013. However, the continuous flow data for RF-1 for 2nd quarter was not located by the Permittee. The loss of the flow data was one of the issues identified in NOV #10103. The missing water quality data for RF-1 for 2nd quarter was provided to the Division.*

Well Monitoring Site: *All required well data was submitted.*

UG-1: *All required parameters were reported for underground mine-water monitoring site UG-1.*

UPDES: *Outfall 001 did not report a discharge this quarter. The required water quality data was reported for Outfall 002.*

3. Were any irregularities found in the data? YES ☒ NO ☐

Surface Water Monitoring Sites-

ST-3- *Stream monitoring site ST-3 produced elevated values for numerous parameters (Field conductivity, dissolved magnesium, dissolved sodium, chloride, sulfate, total alkalinity, total hardness, total dissolved solids, bicarbonate, total cations and total anions). The values were considerably higher than the historical mean for the dataset (e.g. field conductivity value was 9.99 standard deviations higher than the average, reported total dissolved solids concentration was 3.22 standard deviations higher than the historical average). ST-3 has shown a fairly dramatic variability in total dissolved solids (TDS) and its components. An increase in TDS parameters were reported during the 3rd quarter of 2010. However, the concentrations returned to established trend levels for the 2nd and 3rd quarters of 2011 before again producing elevated TDS concentrations in the 4th quarter of 2011.*

ST-6- *Stream monitoring site ST-6 reported elevated concentrations for numerous parameters (flow, dissolved calcium, dissolved magnesium, sulfate, total alkalinity, total hardness, total dissolved solids, bicarbonate, total cations and total anions). The previous*

quarter reported several parameters with lower than usual concentrations (conductivity, flow, D-Ca, D-Mg, D-K, D-Na, CL, SO4, T-Alk., T-Hdns., TDS, Bicarbonate, total cations, total anions). It's unclear as to what is causing this wide fluctuation in water quality values. The flow has been increasingly rather significantly from December of 2010 (1,782 gpm) till this quarter (2,200 gpm). Continued monitoring will be conducted in order to determine what is causing these large fluctuations in water quality.

ST-8- *For the second consecutive quarter, stream water monitoring site ST-8 reported elevated concentrations of dissolved sodium, field conductivity and chloride.*

UPDES Sites- (UPDES Permit #UT0025640)

Site D001- *UPDES outfall D001 (primary sediment pond at mine site) did not report a discharge this quarter.*

Site D002- *UPDES Outfall 002 water quality data was obtained each month this quarter. Flow values continue to rise. The average flow value for the quarter was 2,257 gpm (2,233 gallons per minute average in 2nd quarter of 2012). Site D002 is the mine-water discharge.*

During the previous quarter (2nd quarter 2012), the June 25th, 2012 sample reported a total iron (T-Fe) concentration of 1.41 ppm. The concentration is non-compliant with the UPDES permit limit of 1.0 ppm. All T-Fe concentrations were within the 1.0 ppm limit this quarter. The July 9th, 2012 sample reported a T-Fe concentration of 0.98 ppm.

Spring Monitoring Sites

S-80- *Lower levels for dissolved calcium (D-Ca) and total alkalinity were reported this quarter. The previous quarter site S-80 reported an increase in concentrations for dissolved magnesium, dissolved sodium, chloride, sulfate, total dissolved solids and total cations. The cause of these large fluctuations is not known at this time.*

SP-101- *An elevated concentration for chloride was reported at spring monitoring site SP-101. The concentration was 4 ppm which is 2.18 standard deviations from the mean of 2.99 ppm. The previous quarter, site SP-101 reported a reduction in field pH outside of two standard deviations.*

SP-102- *For the second consecutive quarter, spring monitoring site SP-102 reported an elevated flow value of 7.5 gpm. The mean flow for this site is 3.09 gpm. The previous quarter's flow value was 6.5 gpm.*

SP-8- *For the second consecutive quarter, spring monitoring site SP-8 produced significantly lower concentrations for numerous parameters (dissolved calcium, dissolved*

magnesium, dissolved potassium, dissolved sodium, chloride, sulfate, total alkalinity, total hardness, total dissolved solids, bicarbonate, total cations and total anions). What caused such a pronounced change in these parameters is unclear at this time. Additional monitoring will be conducted.

4. On what date does the MRP require a five-year re-sampling of baseline water data.

On page 7-36 of the approved MRP, the Permittee commits to collecting baseline samples "from each spring in the monitoring program during the low flow (fall) sampling and from each stream monitoring sites during low flow every five years beginning with the first mid-term review."

Baseline sampling of ground and surface water sites will be required during the 3rd quarter of 2016.

5. Based on your review, what further actions, if any, do you recommend?

Continue to monitor the data irregularities cited above for any trends. A field inspection will need to be conducted during the second quarter at the 4 flumes located on the Left and Right Forks of Whitmore Canyon to insure that they properly calibrated and operational.

6. Does the Mine Operator need to submit more information to fulfill this quarter's monitoring requirements?

YES ☐ NO ☒

7. Follow-up from last quarter, if necessary.

YES ☐ NO ☒



Citation for Non-Compliance Utah Coal Regulatory Program

1594 West North Temple, Salt Lake City, UT 84114

Phone: (801) 538-5340 Fax: (801) 359-3940

Citation #: 10103

Permit Number: C0070041

Date Issued: 01/10/2013



NOTICE OF VIOLATION



CESSATION ORDER (CO)



FAILURE TO ABATE CO

Permittee Name: WEST RIDGE RESOURCES

Inspector Number and ID: 54 SCHRISTE

Mine Name: WEST RIDGE MINE

Date and Time of Inspection: 01/10/2013 10:00 am

Certified Return Receipt Number: 7009 3410 0001 4203 2277

Date and Time of Service: 01/10/2013 10:00 am

Nature of condition, practice, or violation:
(See Attached)

Provisions of Act, regulations, or permit violated:

R645-301-731.200, R645-301-731.210 and R645-301-731.220

☐ This order requires Cessation of ALL mining activities. (Check box if appropriate.)


Condition, practice, or violation is creating an imminent danger to health or safety of the public.



Permittee is/has been conducting mining activities without a Permit.



Condition, practice, or violation is causing or can reasonably be expected to cause significant, imminent environmental harm to land, air, or water resources.

Permittee has failed to abate Violation(s) included in
☐ Notice of Violation or ☐ Cessation Order within time for abatement originally fixed or subsequently extended.
☐ This order requires Cessation of PORTION(S) of mining activities.
Mining activities to be ceased immediately: ☐ Yes ☒ No

Abatement Times (if applicable).

Action(s) required: ☒ Yes ☐ No

The Permittee must submit the missing water quality data by no later than February 7th, 2013. In addition, the Permittee must adhere to the required ground and surface water monitoring and reporting requirements as outlined in the approved West Ridge Mine Mining and Reclamation Plan (MRP).

(Print) Permittee Representative

STEVE CHRISTENSEN

(Print) DOGM Representative

Permittee Representative's Signature - Date

DOGM Representative's Signature - Date

SEE REVERSE SIDE Of This Form For Instructions And Additional Information

IMPORTANT – READ CAREFULLY

Pursuant to the Utah Coal Mined Land Reclamation Act, Utah Code Ann. § 40-10-1 et. seq. (Act), the undersigned authorized representative of the Division of Oil, Gas, and Mining (DOGM) has conducted an inspection and found that a Notice of Violation or Cessation Order must be issued.

This order shall remain in effect until it is modified, terminated or vacated by written notice of an authorized representative of DOGM.

1. PENALTIES.

Proposed assessment. DOGM assesses fines based upon a proposed recommendation by an assessment officer. If there is additional information you wish DOGM to consider regarding the cessation order and proposed fine, please submit that to DOGM within *15 days of the date this notice or order is served on you or your agent*. Such information will be used by the assessment officer in determining facts surrounding the violation(s) and amount of penalty. Once DOGM has determined the proper penalty, it will serve the proposed assessment on you or your agent, no later than 30 days of the issuance of this notice or order. See Utah Admin. Code R645-401-600 et. seq.

The penalty will be final unless you or your agent file, within 15 days of receipt of the proposed assessment, a written request for an informal hearing before the assessment officer.

Assessment. For each violation included in this notice, a penalty of up to \$5,000 may be assessed for each separate day the violation continues.

If you fail to abate any violation within the time set for abatement or for meeting any interim step, you will be assessed an additional minimum penalty of \$750 for each day of continuing violation beyond the time set for abatement. You will be issued a Cessation Order requiring cessation of surface coal mining operations or the portion of the operations relevant to the violation.

2. INFORMAL PUBLIC HEARING.

On the reverse side of this page, an authorized representative has made a finding as to whether or not this notice requires cessation of mining. If this order or notice requires cessation of mining, expressly or in practical effect, you may request that an informal public hearing be held at or near the mine site. If you wish an informal public hearing be held, please contact an authorized representative from DOGM. See Utah Admin. Code R645-400-350 et seq. Once an informal public hearing is scheduled, you will be notified of the date, time, and location of the hearing.

If this notice requires cessation of mining, it will expire within 30 days from the date you are notified unless an informal public hearing is held or waived, or the condition, practice, or violation is abated within the 30-day period.

3. FORMAL REVIEW AND TEMPORARY RELIEF.

You may appeal this notice or order to the Board of Oil, Gas, and Mining by submitting an application for hearing within 30 days of receipt of this notice or order. See Utah Admin. Code R645-300-164.300. Please submit the application for hearing to:

Secretary
Board of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801

If applying for a formal board hearing, you may submit with your petition for review a request for “*temporary relief*” from this notice. Procedures for obtaining a formal board hearing are contained in the Board’s Rules of Practice and Procedure and in Utah Admin. Code R645-401-800 et. seq.

4. EFFECT ON PERMIT.

The permit may be suspended or revoked if it is determined that a pattern of violations of the Act, regulations or permit conditions exists, and that the violations were caused by an unwarranted or willful failure to comply.

For further information, consult Utah Code Ann. § 40-10-20 through 40-10-23 and Utah Admin. Code R645-400-300 et. seq. and R645-401 et. seq., or contact the Division of Oil, Gas, and Mining at (801) 538-5340.

West Ridge
Notice of Violation- #10103
January 10th, 2013

Nature of condition, practice, or violation:

The Permittee failed to provide the following water quality data as required by the approved West Ridge Mining and Reclamation Plan (MRP):

1. Stream site ST-6 still missing data for 1st quarter 2012. Several notifications were made to the Permittee as to the missing data.
2. Continuous flow data not submitted for stream monitoring sites RF-1, RF-2, LF-1 and LF-2 for 3rd quarter 2012. According to the approved MRP (See page 7-54, 4th paragraph), *"However, in the important spring snow melt period and extending until mid-late summer the flow recording devices should be accessible and operative. During these times, the company commits to collecting (down-loading) the data on a monthly basis, and reporting the data to the Division on a quarterly basis."* The Division finds that a reasonable interpretation of the MRP passage above is that continuous flow measurements will be collected from the flumes and reported for the 2nd and 3rd quarter of each calendar year. As such, continuous flow measurements for surface water monitoring points RF-1, RF-2, LF-1 and LF-2 for 3rd quarter 2012 were to be reported to the Division prior to the end of 4th quarter 2012.
3. Continuous flow data not submitted for stream monitoring site RF-1 for 2nd quarter 2012. The Division has brought the outstanding flow data for RF-1 2nd quarter 2012 to the Permittee's attention on several occasions.
4. 2nd quarter 2012 water quality data for stream monitoring site RF-1 not approved by Permittee for uploading to Division Coal Mining Water Quality Database. Until the Permittee approves the data for uploading in the database, it has not been officially submitted.
5. 1st quarter 2012 water quality data for stream monitoring site ST-8 has not been approved by the Permittee for uploading to the Division Coal Mining Water Quality Database. Until the Permittee approves the data for uploading in the database, it has not been officially submitted.
6. Flow measurement data was not submitted for spring monitoring site S-80 (Hanging Rock Spring) for 3rd quarter 2012.
7. No data was provided for UPDES Outfall 001 for the entire 3rd quarter of 2012. Monthly sampling with quarterly reporting is required for this monitoring point.
8. A field conductivity value was not reported for UPDES Outfall 002 for the July 8th, 2012 sampling event.
9. Flow readings from the underground flow meters (U-15E and U-17E) were not reported for the month of November. Page 7-51 of the approved MRP indicates, *"The flow readings will be reported to the Division on a monthly basis."* As such, the November flow values from the two underground meters were to be reported to the Division by the end of December 2012.